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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,286	06/30/2004	Anil K. Chinthakindi	FIS920040186US1	4285
32074 INTERNATIO	7590 03/28/2007 NAL BUSINESS MACH	EXAM	EXAMINER	
DEPT. 18G BLDG. 300-482 2070 ROUTE 52			HU, SHOUXIANG	
			ART UNIT	PAPER NUMBER
HOPEWELL J	UNCTION, NY 12533	2811		
SHORTENED STATUTOR	Y PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE	
3 MONTHS 03/28/2007			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

1)⊠ Responsive to communication(s) filed on 12 January 2007. 2a)⊠ This action is FINAL. 2b)□ This action is non-final. 3)□ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4)☑ Claim(s) 1-7 and 9-16 is/are pending in the application. 4a) Of the above claim(s) 4-5, 101-6 is/are withdrawn from consideration. 5)□ Claim(s) is/are allowed. 6)☑ Claim(s) is/are allowed. 6)☑ Claim(s) is/are objected to. 8)□ Claim(s) is/are objected to. 8)□ Claim(s) is/are subject to restriction and/or election requirement. Application Papers 9)☑ The specification is objected to by the Examiner. 10)□ The drawing(s) filed on is/are: a)□ accepted or b)□ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11)□ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12)□ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a)□ All b)□ Some * c)□ None of: 1.□ Certified copies of the priority documents have been received. 2.□ Certified copies of the priority documents have been received in Application No. 3.□ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). *See the attached detailed Office action for a list of the certified copies not received.		Application No.	Applicant(s)					
Shouxiang Hu 2811		10/710,286	CHINTHAKINDI ET AL.					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Exercises of termapy to available under the provision of 37 CRT 13(to). Into event, however, may a reply the timely filed in the provision of 37 CRT 13(to). Into event, however, may a reply the timely filed if NO period for reply is apposited above, the maximum statutory period will apply answ full expire SIX (8) MONTHS from the mailing date of this communication. Feature to reply which the set of extended period for rigory will, by stands, cashe in expirations and the provision of the set from the mailing date of this communication, even if timely filed, may reduce any stands are replicated to the communication and the provision of the set from the mailing date of this communication, even if timely filed, may reduce any stands are replicated to the communication and the provision of the set of the provision	Office Action Summary	Examiner	Art Unit					
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WHICHEVER Is LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under be provided or 30 °CR 11360]. In a event, however, may a reply be timely filed after 60% (6) MCNTHS from the mailing date of this communication. Failine to reply within the set or extended period for regy will, by stakine, cause the application become ABANDORED 60 u.S.C. § 1330, Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any searce fluentium adjustment. Sea 3° CFR 1.704(6). Status 1) □ Responsive to communication (s) filed on 12 January 2007. 2a) ☑ This action is FINAL. 2b) □ This action is non-final. 3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) □ Claim(s) 1-7 and 9-16 is/are pending in the application. 4a) Of the above claim(s) 4-5 101-6 is/are withdrawn from consideration. 5) □ Claim(s) is/are allowed. 5) □ Claim(s) is/are allowed. Claim(s) is/are objected to. 8) □ Claim(s) are subject to restriction and/or election requirement. Application Papers 9) ☑ The specification is objected to by the Examiner. Application Papers 9) ☑ The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Application pay not request that any objection to the drawing(s) be held in abeyance. Sea 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. Sea 37 CFR 1.121(d). 11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) □ Cepties of the priority documents have been received in Application No 1.1 Certified copies of the priority documents hav		V 10 05T TO 5 V 5 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
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DETAILED ACTION

Election/Restrictions

1. According to the latest amendment, claims 1-7 and 9-16 are pending in this application; and claims 1-3, 6, 7 and 9 remain active in this office action.

Claim Objections

2. Claims 1-3, 6, 7 and 9 are objected to because of the following informalities and/or defects:

Claim 1 recites the subject matters of: forming a plurality of metal lines on top of said third dielectric laver interconnected by way of conductive vias. However, it fails to clarify which one (between the recited metal lines and the recited third dielectric layer) is/are interconnected to what by way of the conductive vias. And, in view of the disclosure, it apparently should read as: --forming a plurality of metal lines on top of said third dielectric laver, said plurality of metal lines being interconnected therebetween and to the ground plane electrode by way of conductive vias--.

In claim 1, the term of "selectively removing" should read as: --selectively removing portions of--.

In claim 1, the term of "said ground electrode" should read as: --said ground plane electrode--.

Claim 2 recites the subject matters of: "forming said conductive vias above said ground electrode in said third dielectric laver; etching away dielectric material

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surrounding said conductive vias." But, it fails to clarify which one (between the conductive vias and the ground electrode) is formed in the third dielectric laver, and from which dielectric layer the recited dielectric material surrounding said conductive vias is etched away.

In claim 3, the term of "said etched cavity" should read as: --said etched cavity in said fourth dielectric layer--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3, 6, 7 and 9, as being supported by the elected species and as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the subject matters of "selectively removing said second and third dielectric material surrounding said metal lines and said ground electrode". However, the disclosure lacks an adequate description on them, given that, as shown in Figs. 19

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and 20, no additional portion of the material in second dielectric layer (45) is selectively removed for etching away the recited sacrificial material after the recited elastomeric material (50) is formed therein. Furthermore, it is not clear how the recited second and third dielectric material could surround the recited metal lines, given that the word of "surround" may mean to cover from all sides, and that the second layer (45) and the third layer (60, in which the recited ground plane electrode is formed) are both formed below the recited metal lines (66).

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 6, 7 and 9, as being supported by the elected species and as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said second and third material". There is insufficient antecedent basis for this limitation in the claim.

Claims 6 and 7 recite the subject matters of "actuation electrodes" and "ground electrodes", but fail to clarify their respective relationships to the "actuation electrode" and the "ground plane electrode" already recited in claim 1.

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Response to Arguments

5. Applicant's arguments with respect to claims 1-3, 6, 7 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is 571-272-1654. The examiner can normally be reached on Monday through Friday, 8:30 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard T. Elms can be reached on 571-272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SH March 22, 2007

> SHOUXIANG HU PRIMARY EXAMINER